

Gas Filled Thermometer



Special Features

- C E approved electrical contacts.
- Inert gas filled expansion system.
- Stainless steel case & stem
- With or without thermowell
- Silicon oil filled (optional)
- Standard followed EN 13190.

Application

- All stainless steel inert gas filled thermometers are
- suitable for corrosive media / environments in process industry
- chemical
- Food
- Pharmaceutical
- Pulp
- Paper
- Refinery
- Cement & many more.

Specifications

Standard Version : 63,mm 100 mm, 150 mm, 200 mm & 250 mm

Accuracy	: Class 1 as per EN 13190
Ambient temperature	: -25°C to 65 °C
Operating pressure	: 15 kg/cm ² (without thermowell)
Over range limit	: 120% of Full Scale
Stem diameter	: 8 mm
Process connection	: ½" BSP (M) Adjustable

Case & bezel	: AISI 304 SS (Bayonet Type)
Stem & connection	: AISI 316 SS
Joints	: Tig Argon arc welding

Protection	: IP 68
Dial	: Aluminium, black graduation on white background
Pointer	: Aluminium, black Coloured Micrometer Zero adjustable
Window	: Toughened Glass
Gasket & Filling Plug	: Neoprene

Standard version : Electrical contacts

Accuracy	: Class 1 as per EN 13190
Ambient Temperature	: Maximum 65°C
Window	: Polycarbonate Dome
Dampening Liquids	: Dielectric Oil (Optional)
Other Features	: Refer Specification of Standard Version

Standard version : Silicon oil filled

Accuracy	: Class 1 as per EN 13190
Ambient Temperature	: Maximum 65°C
Window	: Toughened Glass
Dampening Liquids	: Silicon Oil (Option QA)
Gasket & Filling Plug*	: Viton
Other Features	: Refer Specification of Standard Version

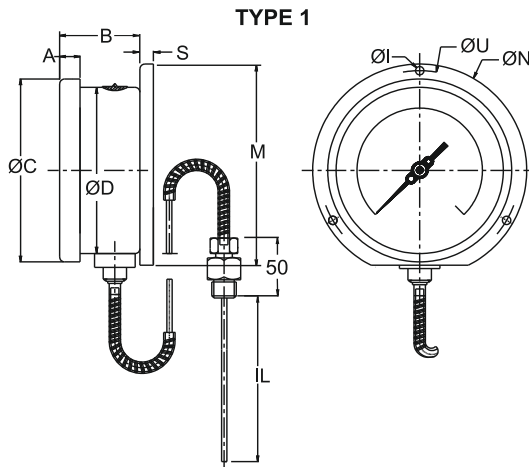
*Gasket & Filling plug of Viton.

Note : The addition of mechanical electric contacts affects the accuracy of instruments such that 1% becomes 1.5%, 1.6% becomes 2.4% etc. (Add the 50% of accuracy; If the contact is of the magnetically assisted type, this value can't be added within the ±5% of setting point.)

Nominal range, measuring ranges & limits of error as per EN 13190

Nominal Range (°C)	Measuring Range (°C)	Limits of Error (± °C)
-20 to +40	-10 to +30	0.5
-20 to +60	-10 to +50	1
-20 to +120	-10 to +110	2
-30 to +30	-20 to +20	0.5
-30 to +50	-20 to +40	1
-30 to +70	-20 to +60	1
-40 to +40	-30 to +30	1
-40 to +60	-30 to +50	1
-20 to +80	-80 to +40	1
0 to 60	10 to 50	0.5
0 to 80	10 to 70	1
0 to 100	10 to 90	1
0 to 120	10 to 110	1
0 to 160	20 to 140	2
0 to 200	20 to 180	2
0 to 250	30 to 220	2
0 to 300	30 to 270	5
0 to 400	50 to 350	5
0 to 500	50 to 450	5
0 to 600	100 to 500	5

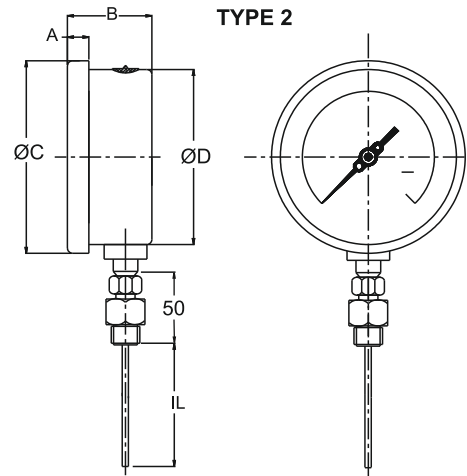
Dimensions - Standard Version



NS	A	B	ØC	ØD	S	M	IL	ØU	ØN	ØI	Approx. Wt.#
100	12.5	43	111	100	6	128	*	118	134	6	1000.0
150	15	43	161	149	6	174.5	*	168	186	6	1550.0
200	18	49	216	200	1.5	229	*	230	245	7	2000.0
250	18	55	262	247	1.5	286.5	*	276	290	7	2250.0

(* As per customer requirement.)

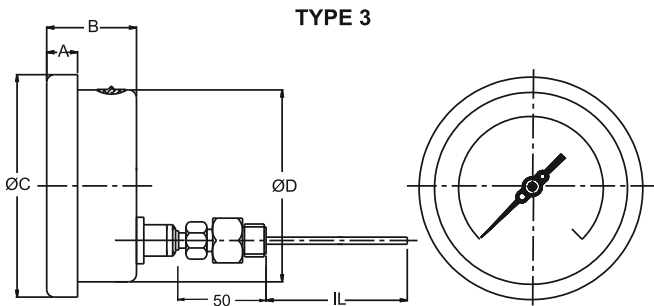
(# Weight in grams with box for 250 mm stem length & 3 meter capillary.)



NS	A	B	ØC	ØD	IL	Approx. Wt.#
100	12.5	45	111	100	*	750.0
150	15	45	161	149	*	1250.0
200	18	49	216	200	*	1500.0
250	18	55	262	247	*	2000.0

(* As per customer requirement.)

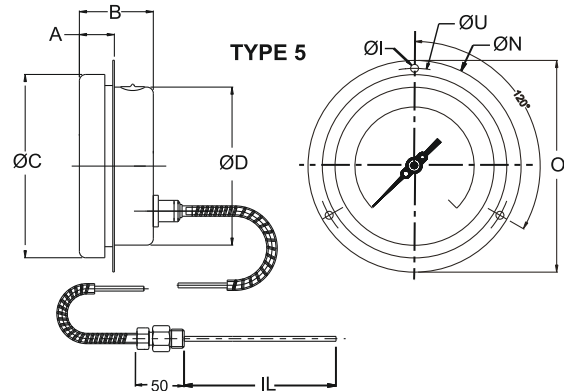
(# Weight in grams with box for 250 mm stem length.)



NS	A	B	ØC	ØD	IL	Approx. Wt.#
100	12.5	45	111	100	*	750.0
150	15	45	161	149	*	1250.0
200	18	49	216	200	*	1500.0
250	18	55	262	247	*	2000.0

(* As per customer requirement.)

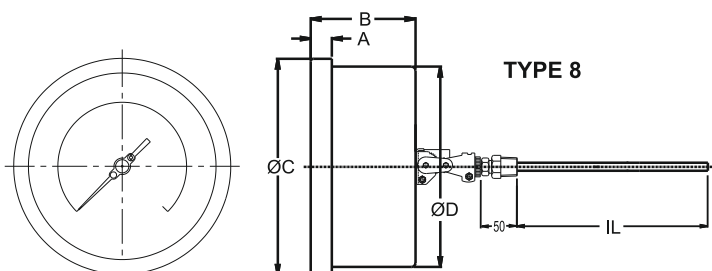
(# Weight in grams with box for 250 mm stem length.)



NS	A	B	ØC	ØD	S	IL	ØU	ØN	ØI	Approx. Wt.#
100	12.5	45	111	100	1	*	118	134	6	1000.0
150	15	45	161	149	1	*	168	186	6	1550.0
200	18	49	216	200	1.5	*	230	245	7	2000.0
250	18	55	262	247	1.5	*	276	290	7	2250.0

(* As per customer requirement.)

(# Weight in grams with box for 250 mm stem length & 3 meter capillary.)



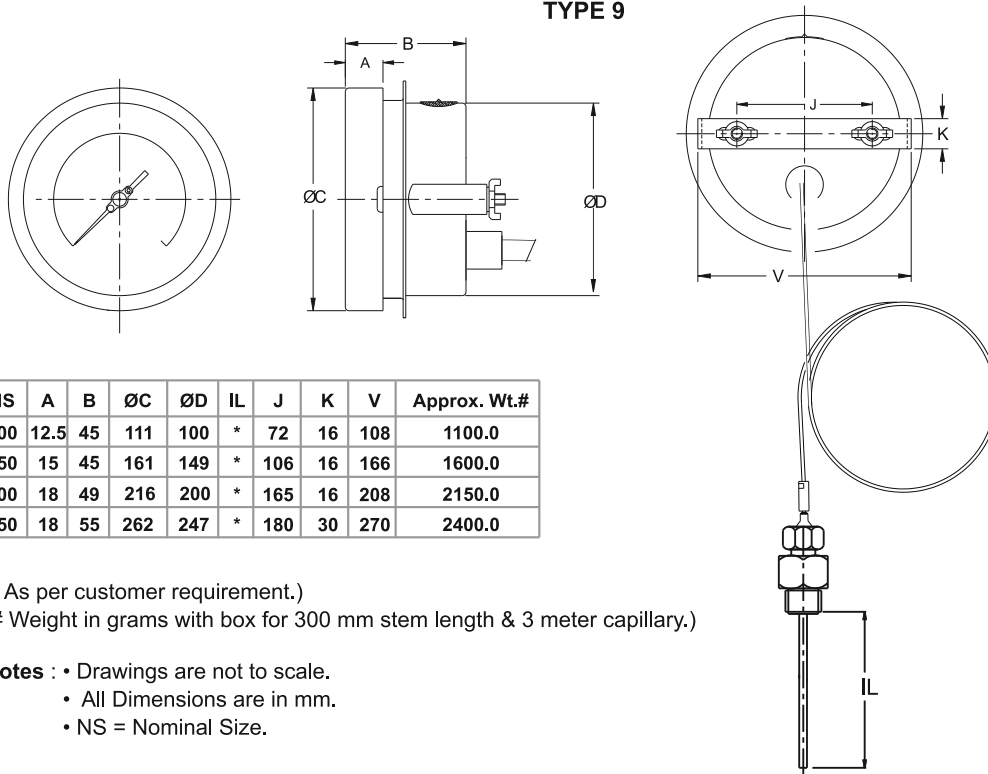
NS	A	B	ØC	ØD	IL	Approx. Wt.#
100	12.5	45	111	100	*	750.0
150	15	45	161	149	*	1250.0
200	18	49	216	200	*	1500.0
250	18	55	262	247	*	2000.0

(* As per customer requirement.)

(# Weight in grams with box for 250 mm stem length.)

Dimensions - Standard Version

TYPE 9



NS	A	B	ØC	ØD	IL	J	K	V	Approx. Wt.#
100	12.5	45	111	100	*	72	16	108	1100.0
150	15	45	161	149	*	106	16	166	1600.0
200	18	49	216	200	*	165	16	208	2150.0
250	18	55	262	247	*	180	30	270	2400.0

(* As per customer requirement.)

(# Weight in grams with box for 300 mm stem length & 3 meter capillary.)

- Notes :**
- Drawings are not to scale.
 - All Dimensions are in mm.
 - NS = Nominal Size.

Range Table

Note : We offer National / International Scales like C, F & Dual scale in C, F & scales as per the requirement can be provided on request. following are the example tables for C

Standard Ranges

Positive range single scale in °C			
Range	Range	Range	Range
0/60	0/120	0/250	0/500
0/80	0/160	0/300	0/600
0/100	0/200	0/400	50/650
Compound range single scale in °C*			
Range	Range	Range	Range
- 80 / 60	- 20 / 60	- 40 / 60	- 20 / 180
- 60 / 40	- 20 / 80	- 30 / 50	- 20 / 100

Note: *Compound ranges are not recommended for electrical contact option. Refer table for limits of error as per EN13190 (On First Page)

ACCESSORIES (* Refer datasheet for Thermowells)

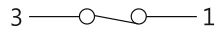
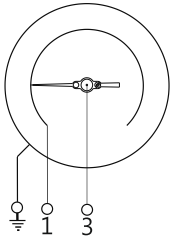
- * Thermowell

Electrical Contact Wiring Information

Wiring diagrams for electric contacts

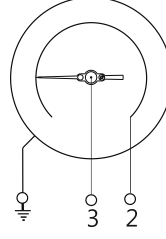
Single Contact

1 NO



Opening

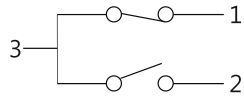
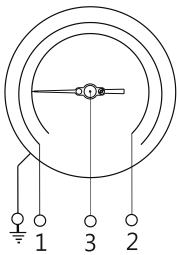
1 NC



Closing

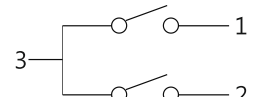
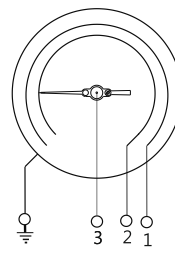
Double contact

1 NO + 1 NC



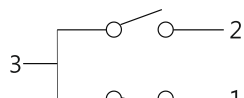
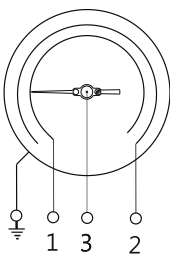
Opening 1
Closing 2

1 NC + 1 NC



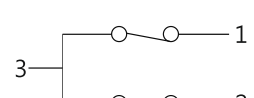
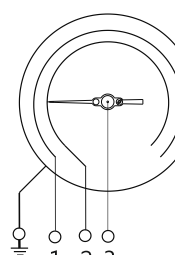
Closing 1
Closing 2

1 NC + 1 NO



Closing 2
Opening 1

1 NO + 1 NO



Opening 1
Opening 2

How To Order										Example										
Basic Model										GT										
Code																				
Nominal Size		25		40		45		60			80		100							
Type of Mounting(*without Capillary option)		63 mm		100 mm		125 mm		150 mm			200 mm		250 mm							
1		Wall/surface/projection mounting		4		Direct Center back entry								XX or XXX						
		With bottom entry		5		Lower back entry with front flange														
2		Direct bottom entry*		8		Every angle back entry*														
3		Direct lower back entry*		9		Lower back entry with mounting bracket														
Process Connection (# Not recommended for Revolving/ Swivel connections.)										XXX										
3BM		3/8" BSP (M)*		4BM		½" BSP (M) (Standard)*		5BM			¾" BSP (M)									
3NM		3/8" NPT (M)*#		4NM		½" NPT (M)#*		6BM			1" BSP (M)									
3TM		3/8" BSPT (M)*#		4TM		½" BSPT (M)#*		4MM			M20 x 1.5 (M)*									
* Suitable for stem diameter 6 to 10 mm										XX										
Process Connection Type																				
AD		Adjustable (Standard)		FX		Fixed		SL			Revolving / Swivel									
Stem Diameter																				
SD04		4 mm		SD06		6 mm (Standard)		SD08		8 mm		SD10		10 mm		SD12		12 mm		XXXX
Stem Length (Below thread Max. 600 mm)																				
Please specify in		mm		Minimum stem Length (Below Thread)				120 mm		100 mm		100 mm		80 mm				100 mm		
				Stem OD				6 mm		8 mm		10 mm		12 mm						
Range										0/100°C										
Refer range table																				
Type		ST		With rigid stem		CP		With capillary												
Capillary length (Max up to 15 Mtrs.) In meters (e.g. 1.5 = 1.5 meters 2.0 = 2 meters)																				
Capillary		S4		AISI 304 SS		S6		AISI 316 SS		XX										
Capillary covered with armour (Applicable with S4 or S6 if selected)										XX										
S4		AISI 304 SS		S6		AISI 316 SS		PV			PVC (Ambient Temp. Max. 60°C)									
Electric Contacts (FOR NS 100 mm & 150 mm Only) (C € Approved)																				
(With IP protection up to IP 55 & window polycarbonate dome type)																				
A) Single insulated magnetic snap action type										B) Inductive type (220 V AC, 0.4 Amp.)										XX
(230 V AC, 1 Amp.) (48 V DC, 0.5 Amp.)																				
M1		Single; normally closed (1 NC)		D1		Single; normally open (1 NO)														
M2		Double; normally closed + normally open (1 NC + 1 NO)		D2		Single; normally closed (1 NC)														
M3		Single; normally open (1 NO)		D3		Double; normally closed + normally open (1 NC + 1 NO)														
M4		Double; normally open + normally closed (1 NO + 1 NC)		D4		Double; normally open (both NO)														
M5		Double; normally closed (both NC)		D5		Double; normally closed (both NC)														
M6		Double; normally open (both NO)		D6		Double; normally open + normally closed (1 NO + 1 NC)														
Optional Extras										XXX										
CBS		AISI 316 SS case & bezel**		CDD		Custom designed dial														
LGF		Dampening liquid glycerin filled (ambient temp. Max. 65°C)*		STG		Shatterproof/safety glass														
LSI		Dampening liquid silicon oil (ambient temp. Above 65°C)*		TND		Tag No. marking on Dial														
MRP		Maximum reading pointer with plexi glass (for dry version)**		STP		SS tag plate														
MTC		Material test certificates#		DOF		Dielectric oil filled***														
AVS		Anti-vibration Spring Assembly																		

* Dry version & except electrical contacts. ** Available for NS 100 mm to 150 mm. Consult factory for minimum order quantity & delivery.

*** Gasket & Filling plug of Viton. # Material test certificates will be provided for wetted parts only with chemical composition testing. For others, please consult factory. **Five Point Calibration Certificate Provided With Each Gauge For Measuring Range Only.**

Ordering Example: GT - XX or XXX - X - XXX - XX - XXXX - 100 mm - 0/100°C - XX - 3Mtr - XX - XX - XX - XXX

For other optional items, please contact factory for delivery and minimum quantity of order. Note : Specifications and dimensions given in this product catalogue represents the state of engineering at the time of printing. Modifications may take place and materials specified may be replaced by others without prior notice.